

Getting the Bigger Picture With Digital Surveillance

As the digital age continues to evolve at breakneck speed, analog technologies such as audio recorders, VCRs, and tape cassettes are quickly becoming things of the past. Such analog components can be severe liabilities in an industry where speed, accuracy, and clarity are essential to daily operations. This especially holds true for financial institutions, banking facilities, and other high-security/surveillance areas that rely heavily on real-time data to continuously monitor monetary transactions, as well as customer behavior.

To keep in step with the needs of these entities, Diebold, Inc., has crossed over the digital threshold with new observation technology that the company believes will transform the surveillance world in the same manner that the compact disc revolutionized the music industry. Diebold's answer to analog stemmed from a Space Act Agreement with NASA's Glenn Research Center, in which the North Canton, Ohio-based company acquired the exclusive rights to video observation technology that was designed for high-speed applications and does not require human intervention.

Glenn developed the Video Event Trigger and Tracking System technology to accelerate video image analysis for various ongoing and future space applications. For instance, microgravity experiments aboard the Space Shuttle or the International Space Station (ISS) require high-resolution, high frame-rate video

technology to replace photographic movie film, which is too heavy and bulky, and cannot be processed in space. While still being considered for use on a variety of future experiments scheduled for the ISS, NASA's trigger and tracking system has the capability to process images at up to 200 frames per second, a faster rate than most video systems currently on the market.

Diebold, a global leader in providing integrated self-service delivery systems and services, implemented the patented trigger and tracking technology into its AccuTrack™ digital, color video recorder, a state-of-the-art surveillance product that uses motion detection for around-the-clock monitoring. AccuTrack captures digitally signed images and transaction data in real-time, and stores this information on a multi-gigabyte hard drive. This process replaces the onerous tasks involved in operating a VCR-based surveillance system, and subsequently eliminates the need for central viewing and tape archiving locations altogether. Even more, AccuTrack can transmit stored images and data to virtually any Web-enabled laptop or desktop personal computer. This feature allows for immediate access to valuable evidence anywhere in the world, including instances of fraud and crime caught on AccuTrack's monitoring cameras. In the event of a robbery, photos of the suspect can be immediately sent electronically to the police and the media.

With up to 24 camera inputs and programmable camera sequencing, the AccuTrack can monitor an entire branch facility, including four automated teller machines (ATMs), multiple teller lines, and new account areas, all from one central location. The system also allows banks to handle Regulation E claims regarding unauthorized ATM withdrawals on the spot. Such claims are reviewed immediately by customer service representatives who use the digital recorder to access relevant transaction photos and data. The end result is less time spent on investigating fraud and a lower limit of acceptable losses.



The AccuTrack™ digital, color video recorder uses motion detection for around-the-clock monitoring.

In addition to receiving assistance from NASA, Diebold sought advice from security personnel across the country to develop AccuTrack. During an alpha testing phase in 1996, the digital recorder flourished for the Bank of Hawaii, allowing the institution to perform certain operations in just “seconds,” compared to the 2 to 3 days previously required.

The first commercial AccuTrack units were installed at the USAlliance Federal Credit Union in Rye, New York. Since AccuTrack is compatible with existing general surveillance equipment, USAlliance was able to use its existing cameras and wiring in conjunction with Diebold’s digital technology to monitor ATMs serving customers in remote locations.

In a rather unusual situation, AccuTrack was able to determine whether a natural disaster had affected a bank in Fort Worth, Texas. The First State Bank of Texas installed AccuTrack recorders throughout its branches in the Fort Worth/Dallas metropolitan area in an effort to phase out analog systems. In March of 2000, a series of tornadoes struck the city of Fort Worth, and media reports indicated that a glass building located just a few blocks away from the bank was shattered by one of the funnel clouds that swept through the region. Following the disaster, police and emergency response personnel shut down a 12-square-block area of the city. Unfortunately, officials from the First State Bank of Texas had no way of knowing if their vaults, personal computers, safe deposit boxes, and other bank property were scattered among the city streets.



After unsuccessful attempts to get to the bank that evening and the next day, the president traveled to the headquarters office in Denton, where he logged on to the Ft. Worth branch’s AccuTrack recorder. To the president’s relief, AccuTrack’s lobby camera showed that the building’s glass windows were still intact, the teller line cameras showed that papers and files were unscathed and in order, and the drive-through camera showed that there was no structural damage to the building.

Regardless of the scenario, whether it be a minor transaction error or a destructive tornado, it is safe to say that AccuTrack has it covered from all angles. ❖

AccuTrack™ is trademark of Diebold, Inc.

The state-of-the-art technology can transmit stored images and data to virtually any Web-enabled laptop or desktop computer in the world.